“Energy Priorities for Latin America and the Caribbean: A Perspective on the Sixth Summit of the Americas in Cartagena”

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Energy Security

Sustainable, Affordable, Reliable, Access to Diverse Energy Supplies

Managing the Geopolitics of Energy

- Wealth/Power/Influence
- Market Dynamics
- Energy Frontiers
- Spare Capacity

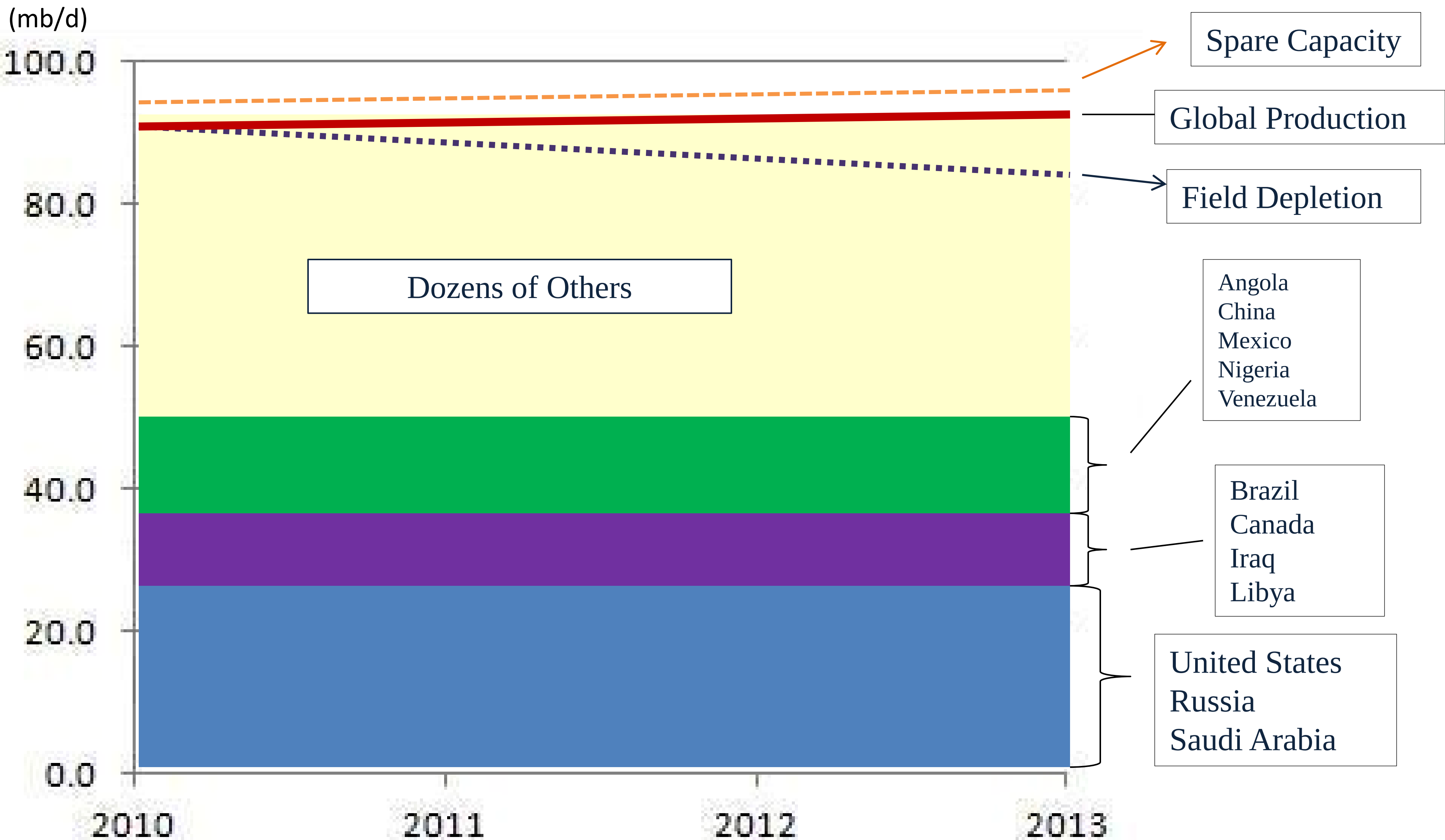
Stimulate Markets for Energy Transformation

- Private and Donor Finance
- Innovation & Investment
- Access to Electricity/ Regional Interconnection
- Tariffs and Regulations
- Renewable/Efficient/Clean Technology

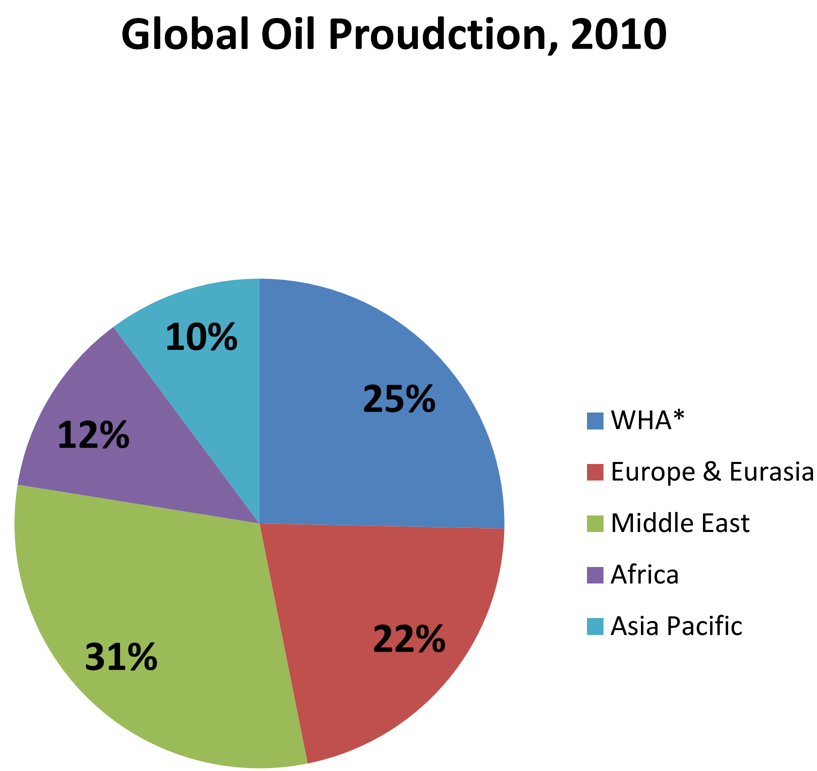
Transparency , Governance, and Access to Energy

- Resources: Budgets/People
- Energy Poverty
- Markets Amid Poverty
- Entrepreneurship/Innovation

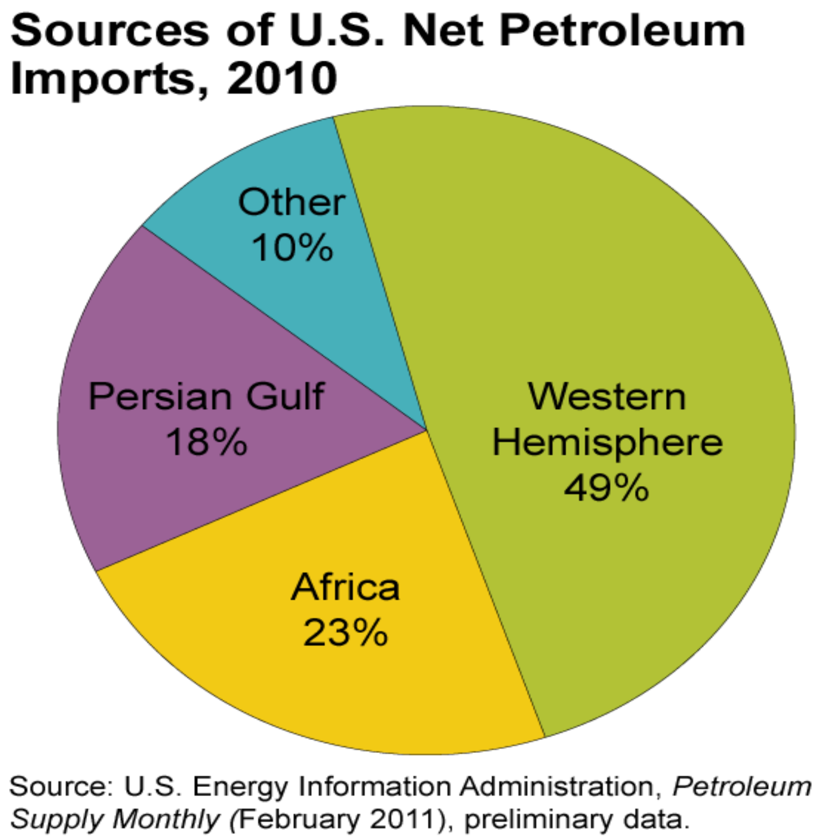
Challenge of Stability in the Oil Market



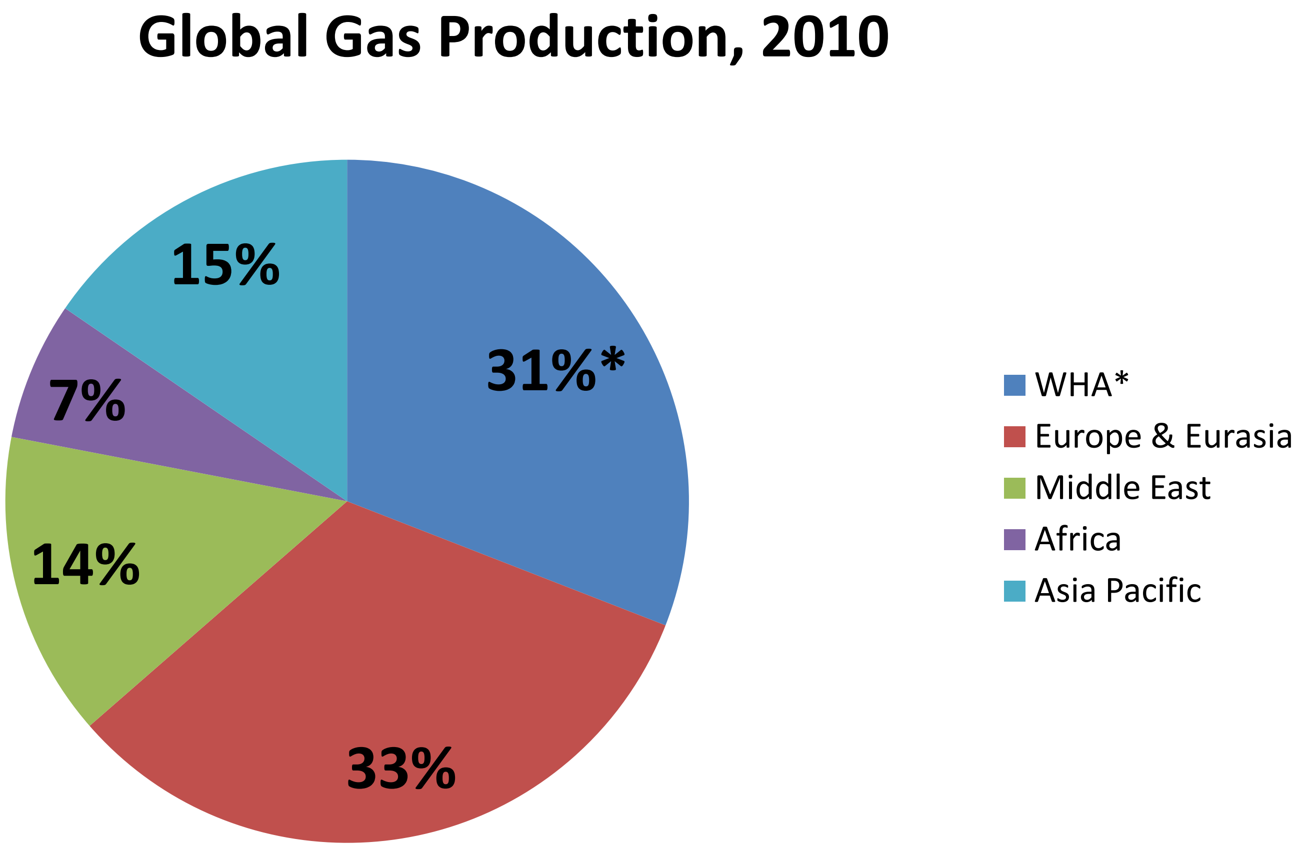
The Americas Supply ¼ of World's Oil



The Americas Supply ½ of U.S. daily oil imports

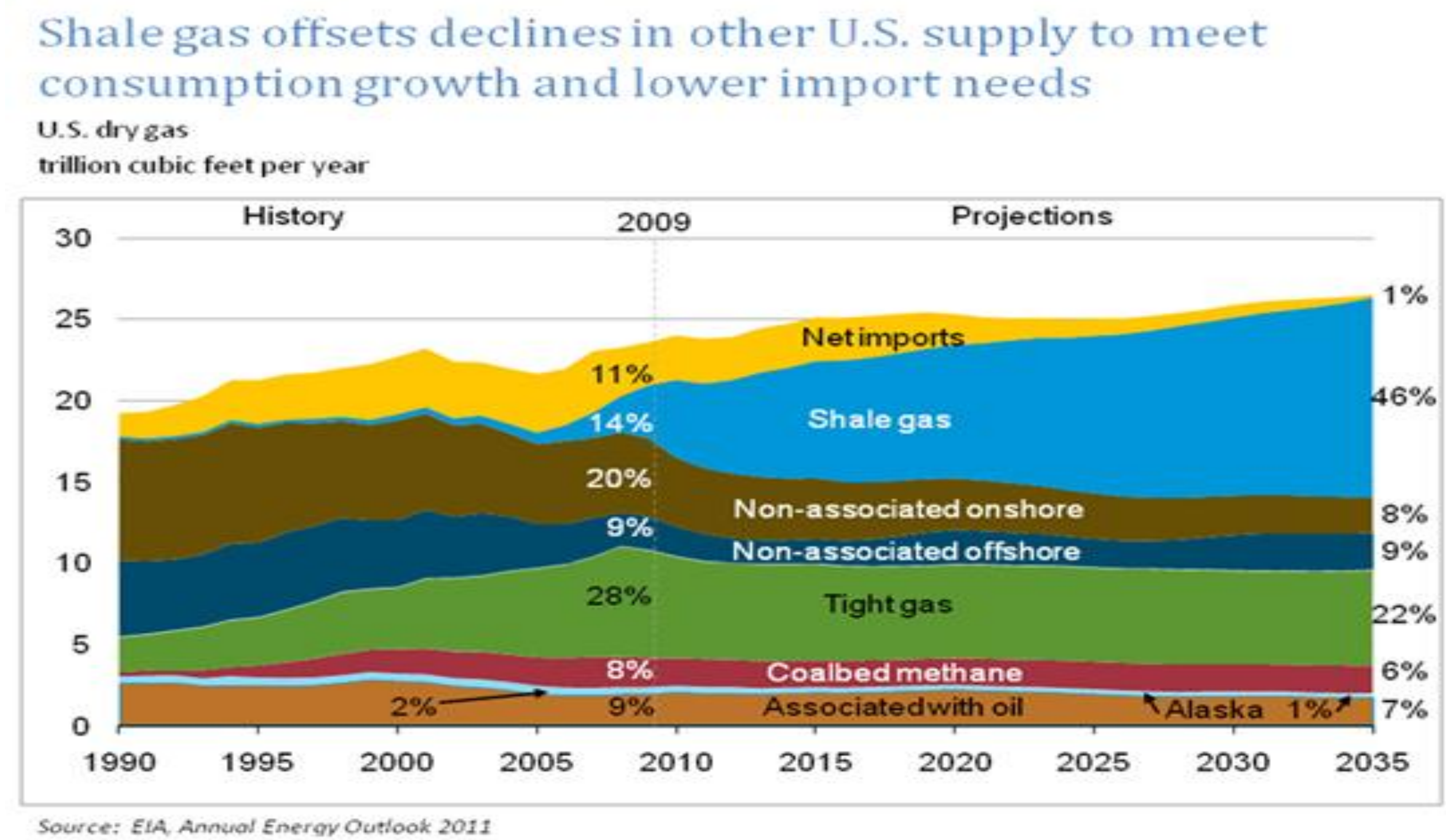


The Americas Supply 1/3 World's Gas

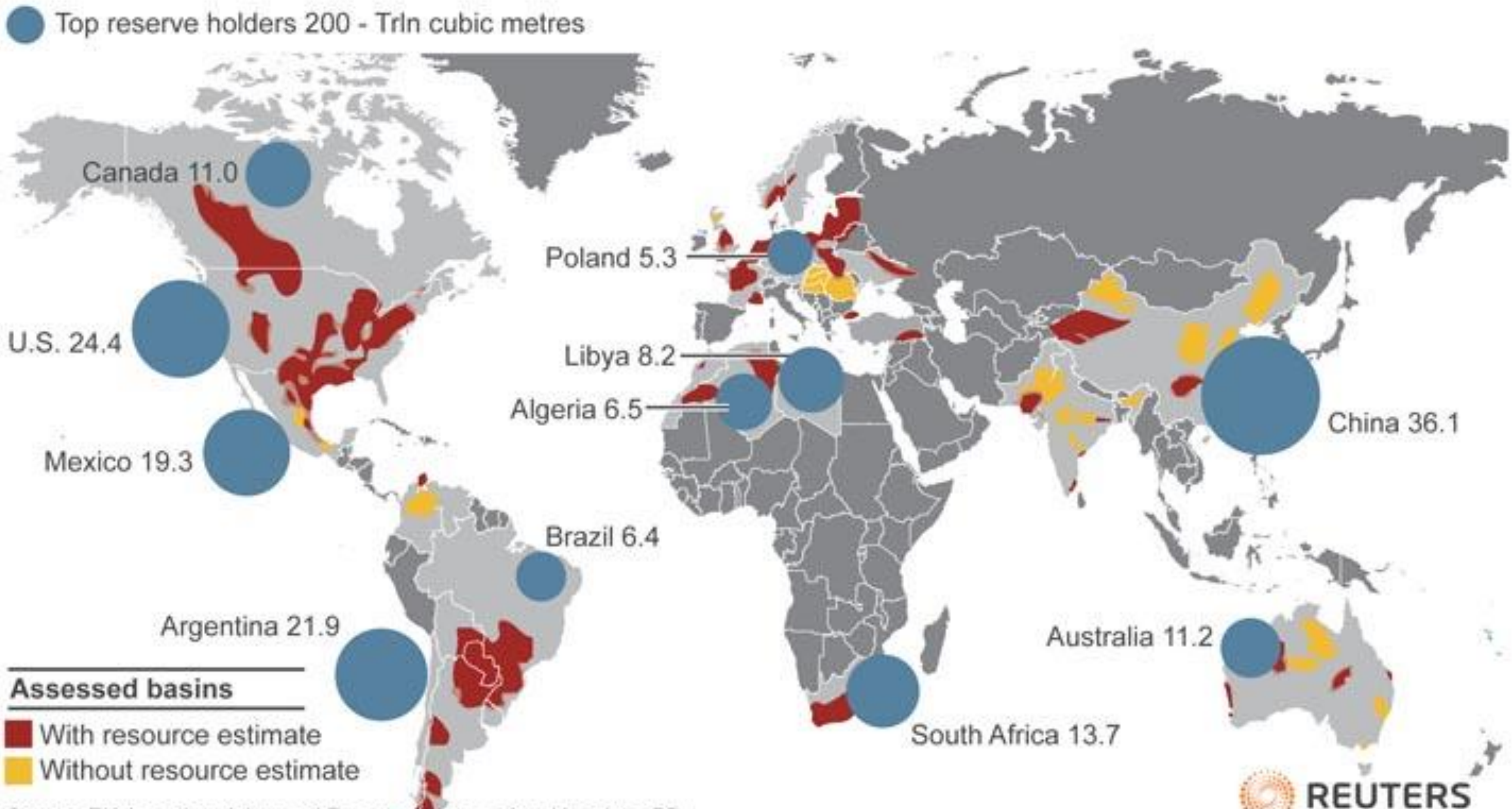


*WHA without U.S. gas production represents 11%

U.S. Shale Production



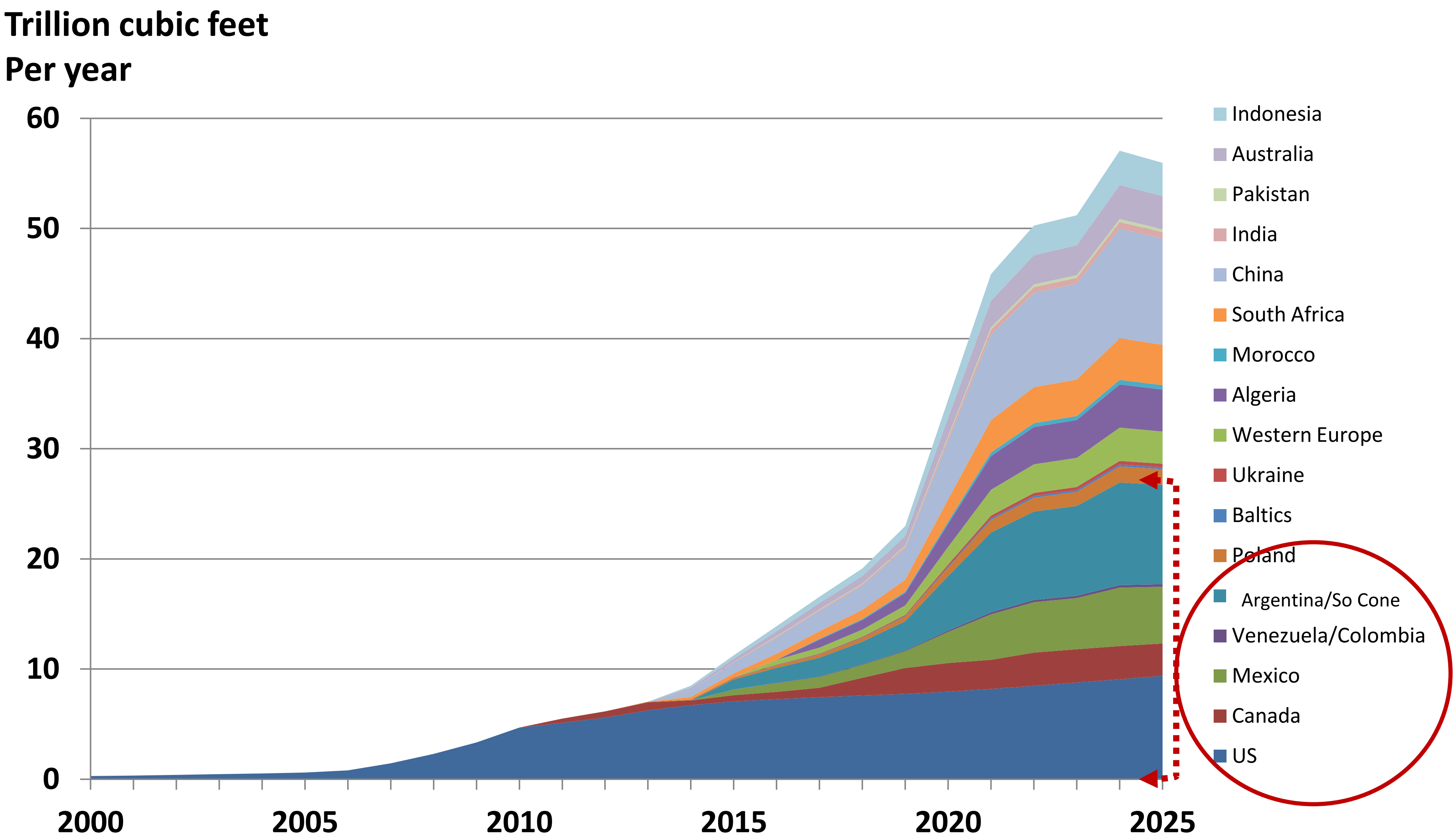
Global shale gas basins, top reserve holders



Source: EIA based on Advanced Resources International Inc data, BP

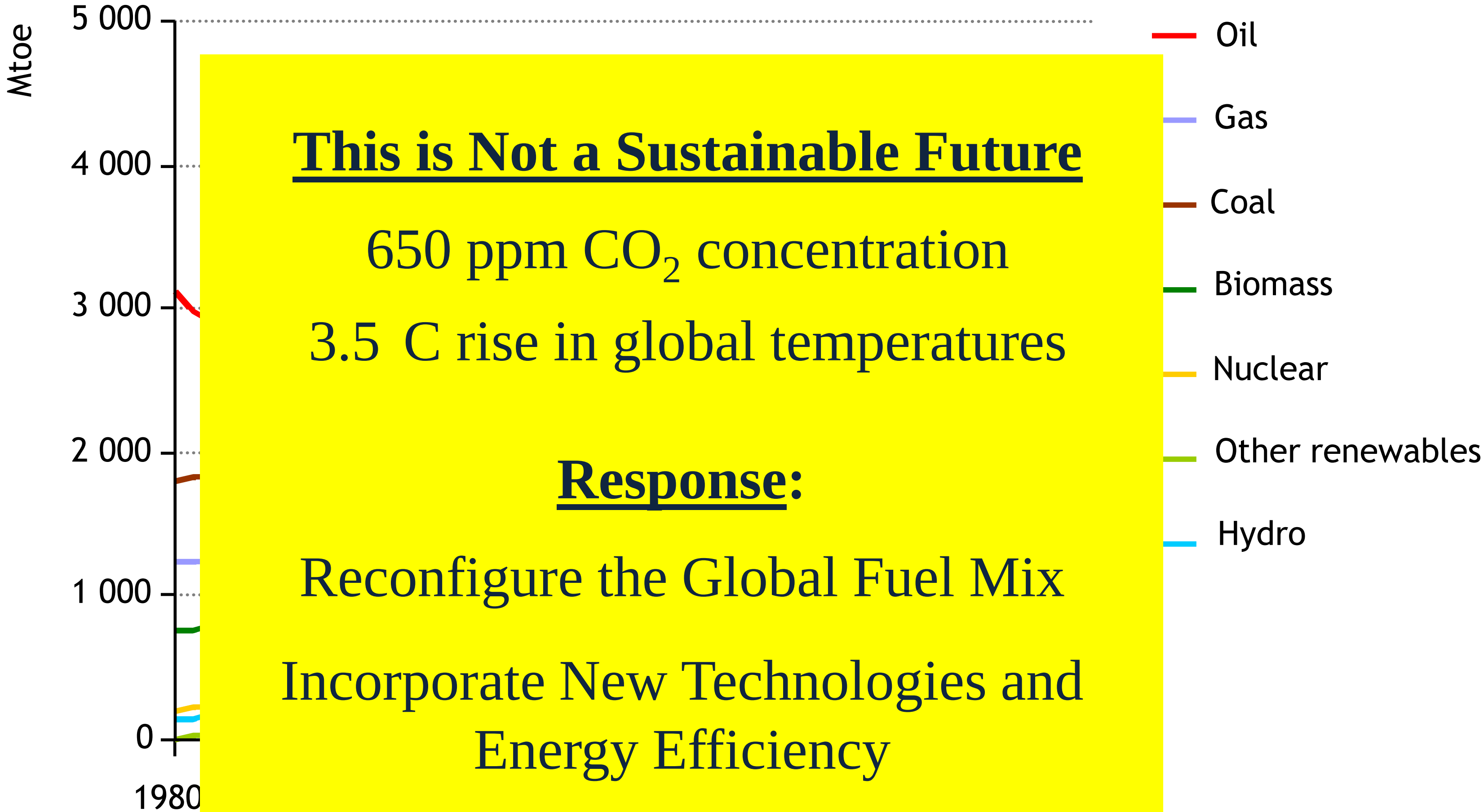
Reuters graphic/Catherine Trevethan

Possible Impact on Global Gas Market



Source: ENR/EGA/EP

World Primary Energy Demand by Fuel in the IEA's GAS Scenario



This is Not a Sustainable Future

650 ppm CO_2 concentration

3.5 C rise in global temperatures

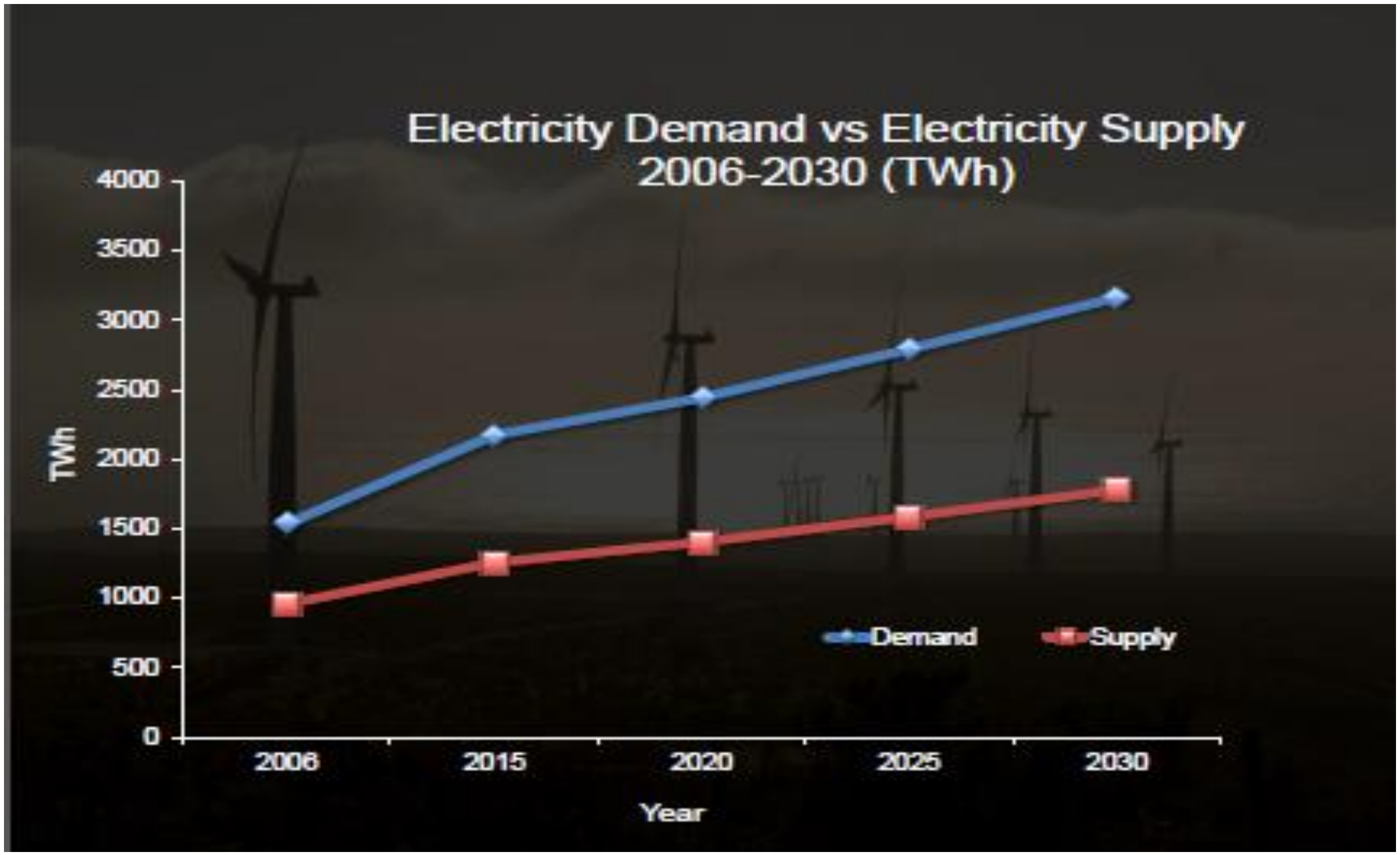
Response:

Reconfigure the Global Fuel Mix

Incorporate New Technologies and Energy Efficiency

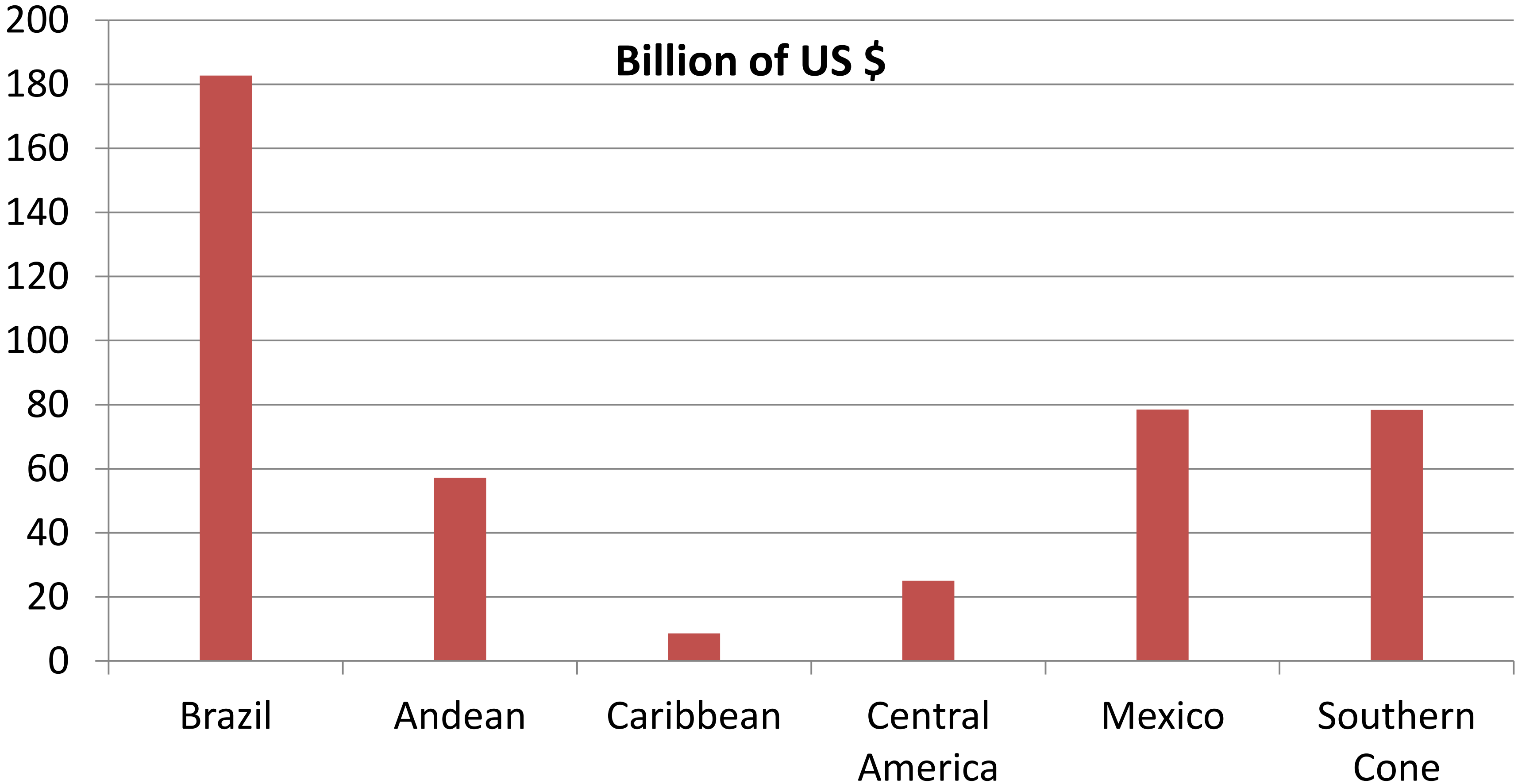
Develop Commercial Markets for Clean Tech; Strong Power Markets

The Americas Need Power Investment to Support Economic Growth

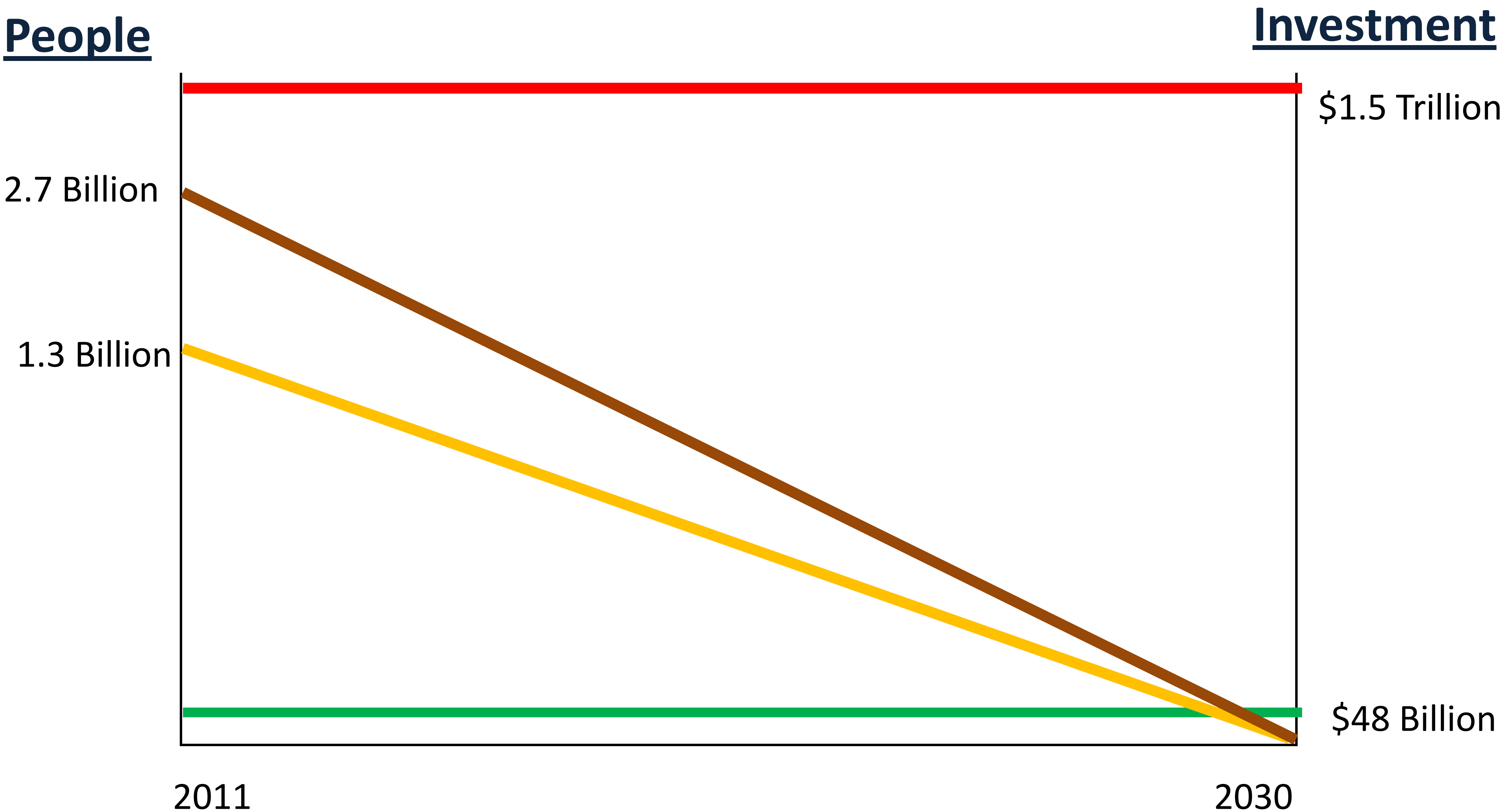


Source: IDB

Electricity Investments Needed by Sub-region: 2008-2030

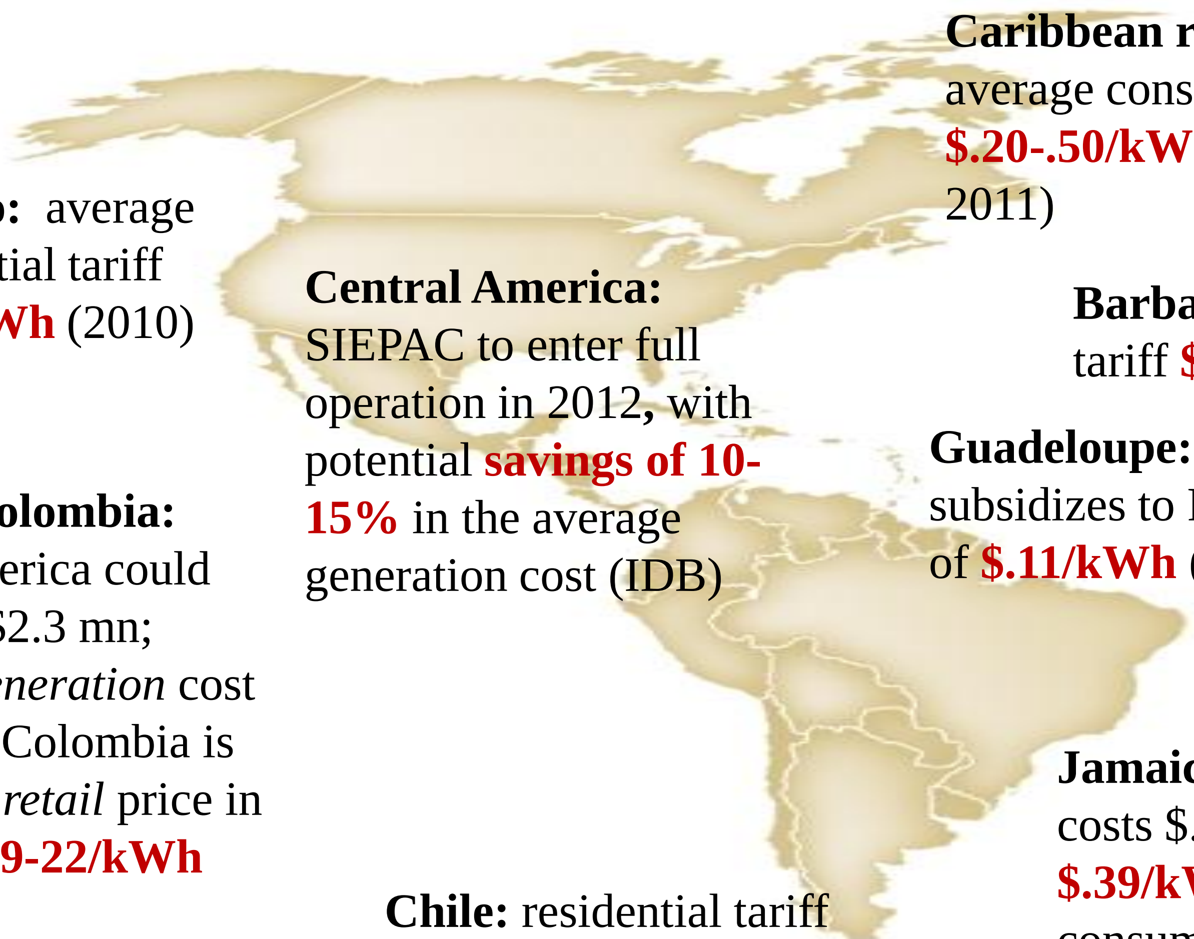


Investment for Access:
3% of total investment needed by 2030



<u>Energy Poverty</u>: Access and Affordability

93% electrified, but 31 million citizens without access



Mexico: average residential tariff **$.09/kWh** (2010)

Panama-Colombia: Central America could save up to $2.3 mn; marginal *generation* cost of hydro in Colombia is **$.05/kWh**; *retail* price in Panama **$.19-22/kWh**

Central America: SIEPAC to enter full operation in 2012, with potential **savings of 10-15%** in the average generation cost (IDB)

Chile: residential tariff **$.18/kWh** (2011)

Caribbean region: average consumer tariff **$.20-.50/kWh** (WB 2011)

Barbados: consumer tariff **$.32/kWh** (2010)

Guadeloupe: France subsidizes to Paris price of **$.11/kWh** (2010)

Jamaica: Generation costs $.24/kWh and **$.39/kWh** residential consumer price (2011)

Electrical Interconnection

Commercial Opportunities in the Caribbean

Challenges/Context:

- High dependence on oil and highest cost of electricity in the world
- Electricity demand expected to double in next 20 years
- Small isolated electricity markets

Electricity integration:

- lowers electricity costs
- increases reliability
- lower reserve margins
- facilitates renewable energy with larger markets
- increased resilience to climate and weather events

Attachment: Technically Feasible Caribbean Electrical Grid Interconnection Opportunities and Benefits

Interconnection	MW	Km	Energy Generation	Estimated Savings (cents/kWh)*
Dominica – Martinique	100	70	Geothermal exported from Dominica.	13.3/ displacing distillate 1.5/ displacing pipeline gas
Dominica – Guadeloupe	100	70		
Nevis – Puerto Rico	400	400	Geothermal exported from Nevis.	14.5/displacing HFO -0.7/displacing LNG
Nevis – US Virgin Islands	80	320		1.5/displacing distillate
Nevis – St. Kitts	50	5		13.4/displacing distillate
Saba – St. Maarten	100	60	Geothermal exported from Saba.	12.2/displacing distillate
DR – Haiti	250	563	DR export of HFO fueled steam plants or gas-fueled CC.	-2.3/HFO export displacing distillate 9.6/gas export displacing distillate
Puerto Rico – DR	400	150	Not analyzed but expected to be surplus capacity in Puerto Rico	Not analyzed

Source: World Bank, 2011, *Caribbean Regional Electricity Supply Options: Towards Greater Security, Renewables, and Resilience.*

Thank you

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